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Vol. 1

COLUMBUS, OHIO, MAY 10, 1922

No. 2

DIVISION OF LABOR STATISTICS
REPORT NO. 2

Statistics of Mines and Quarries in Ohio 1921



DEPARTMENT OF INDUSTRIAL RELATIONS

PERCY TETLOW,
Director

W. J. BIERESHEIMER,
Chief, Div. Labor Statistics

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DIVISION OF LABOR STATISTICS

STATISTICS
OF
MINES AND QUARRIES
IN OHIO

1921



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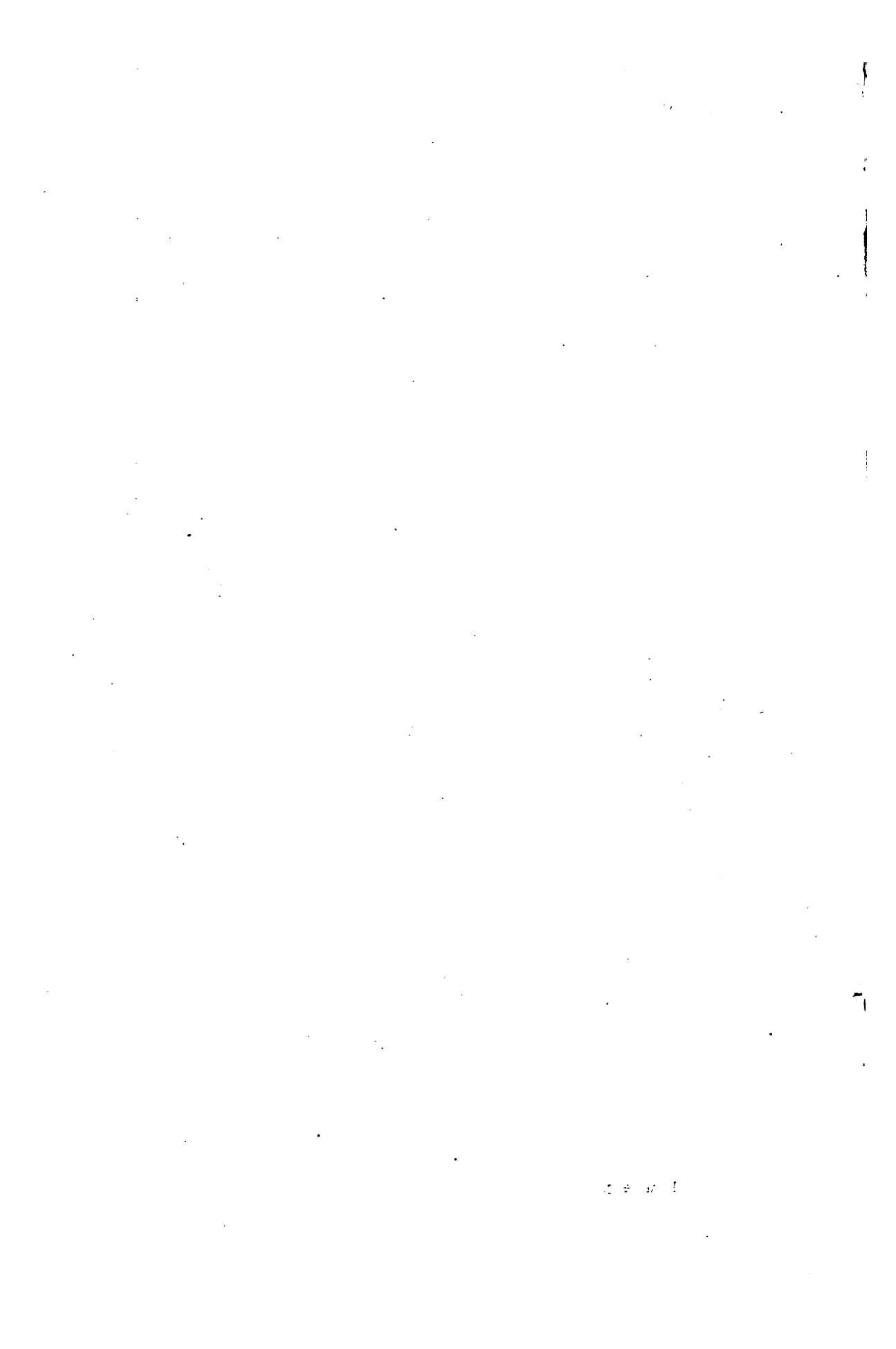
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PREFACE

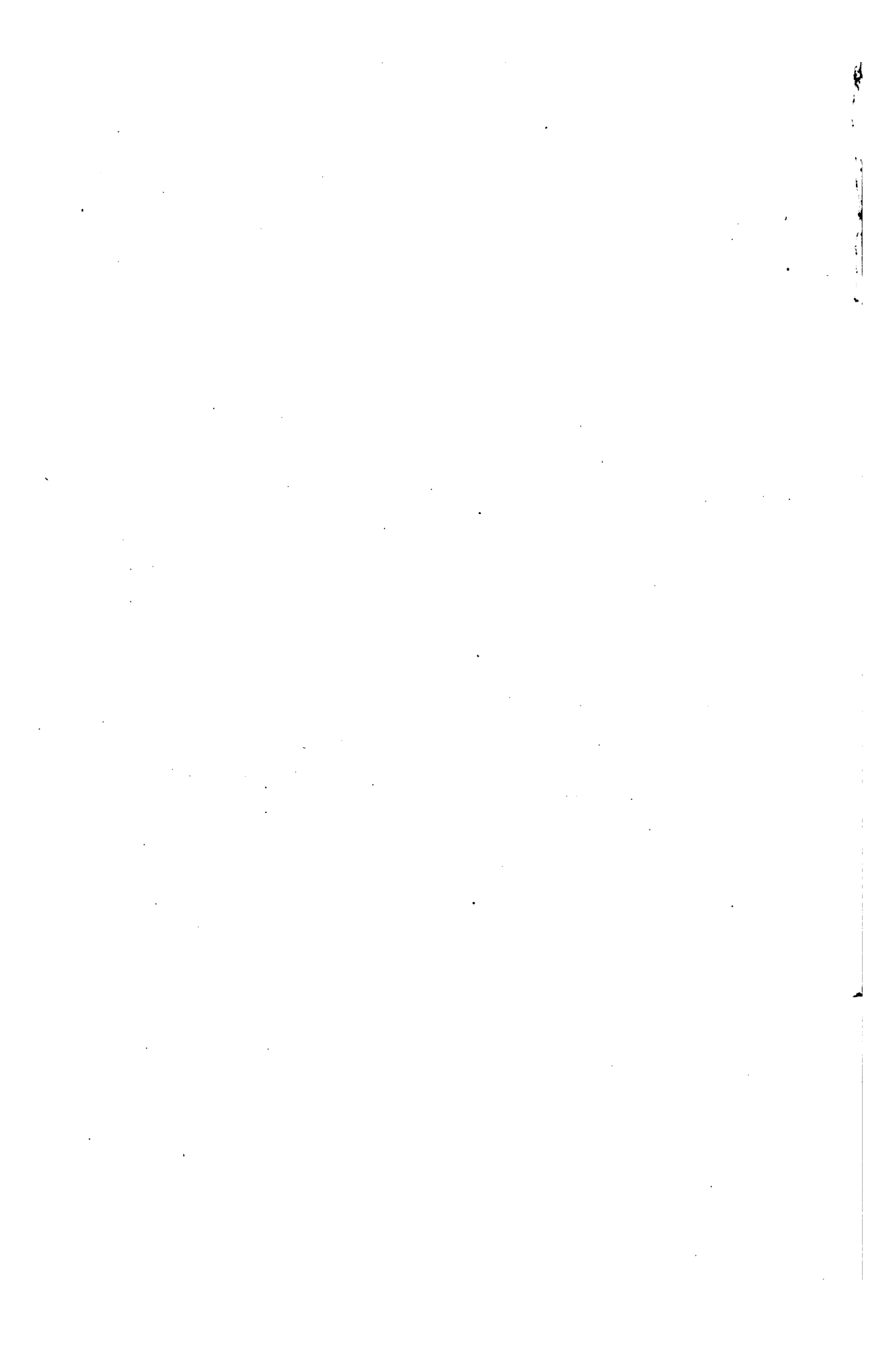
Th Division of Labor Statistics presents in this report data on production, number of employes, wage payments, and hours of labor in the mines and quarries of Ohio for the year ending December 31, 1921. Coal, fire clay and gypsum mines and limestone and sandstone quarries are each discussed in separate sections.

All facts herein set forth were secured from schedules furnished by the owners or operators of these mines and quarries.

This report was prepared by Miss Florence E. Kinnison, Statistician.

W. J. BIEBESHEIMER,
Chief of Division.

Columbus, Ohio, May 10, 1922.



COAL MINES.

PRODUCTION

Coal production reported to the Department of Industrial Relations, Division of Labor Statistics, by operators and owners of 1,104 mines for the year ending December 31, 1921, totals 32,242,857 tons (a). This is 7.9 per cent of the total bituminous production of the United States, estimated as 407,000,000 tons by the United States Geological Survey on March 11, 1922, and ranks Ohio as the fourth state in quantity of such coal mined.

Production was the smallest of any years since 1915 and compared with 1920, was short 12,984,220 tons, or a decrease of 28.6 per cent.

Belmont County shows the greatest production, mining about 36 per cent of the coal produced in the State; Jefferson County ranking second with about 14 per cent; Guernsey County ranking fourth with 9 per cent and these four counties produced 72 per cent of the coal mined in the State.

Table 1 shows the production by counties for the years 1916 to 1921 inclusive. It will be noted that only seven counties produced more than 1,000,000 tons during the year 1921 as compared with nine counties during the year 1920.

METHOD OF PRODUCTION.

Table 2 giving the method of production, shows that machine mining produced 90.3 per cent of the coal in the State, pick mining 5.2 per cent and by the stripping method, 4.5 per cent.

Schedules furnished this Department show that the stripping method is used in eleven counties in combination with the other methods, while seven counties report pick mining exclusively.

Table 3 gives the total production from 1889 to 1921 inclusive, classified as to the method of production.

Table 4 shows the production for the counties by months for the year 1921.

DISPOSITION OF PRODUCT.

Table 5 complies with the rules of the Department of Industrial Relations requiring information from coal operators as to the disposition of their product and these are shown under the four important classifications.

(a) The short ton of 2,000 pounds is used throughout this report, and all figures are for total production, without regard to grade of coal mined.

MINING MACHINES.

Table 6 gives data as to the number of mining machines in use in the State, with their production classified as to counties. The reports show that there are but seven mining machines in operation in the State using compressed air as a motive power, all others being operated by electricity. And it is interesting to note that over 90 per cent of the coal was produced by mining machines during the year 1921.

Table 7 gives a comparison of the years 1920-1921 as to the number of machines in operation, their production per year and per day by counties.

Table 8 shows the number of machines in the State and their production per year and per day from 1904 to 1921 inclusive.

HAULAGE METHODS.

Table 9 gives detailed information as to the several methods of haulage in coal mines and it will be noted that animal haulage is an important factor in the production of coal.

CHARACTER OF OPENINGS.

Table 10 shows the number of drift, slope and shaft mines in the State and it will be noted that drift mines predominate.

METHODS OF VENTILATION.

Table 11 indicates the methods of ventilation used in the mines of the State, showing that over one-half use fans for this purpose.

NUMBER OF EMPLOYES.

Table 12 gives the average number of employes in pick, machine and stripping mines arranged by counties comparing the years 1920-1921, and it will be noted that while the pick and stripping mines reduced their forces practically 50 per cent there was an increase in the number of machine mine employes, as the total for 1921 was 54,089, which was but slightly less for the year 1920.

Table 13 shows the average number of employes in pick, machine and stripping mines from 1904 to 1921 inclusive and it will be noted that during this period the percentage of employes in machine mines rose from 61 to 90 per cent, while the employes in pick mines dropped from 38 to 6 per cent.

Table 14 gives a comparison of the years 1920-1921 as to the average number of employes in pick mines classified as to occupations, by counties.

Table 15 shows similar information as to machine mines.

FLUCTUATION OF EMPLOYMENT.

Table 16 indicates the average number of days worked in the three classes of coal mines in the State, giving this information by counties as well as a comparison of the years 1920-1921, and shows an average decrease of 47 per cent in the average number of days worked.

Table 17 shows the average number of days worked in mines from 1904 to 1921 inclusive.

Table 18 shows the fluctuation in the number of employes on the payroll nearest the fifteenth of each month during the year.

PRODUCTION PER EMPLOYEE.

Table 19 shows the amount of coal produced per year and per day, per employee, in their various occupations, giving a comparison of the years 1920-1921 by counties. While the average per day for 1921 compares very favorably with 1920, the yearly average is much smaller due to the less number of days worked.

Table 20 gives this information for the State for the years 1895 to 1921 inclusive.

WAGE AND SALARY PAYMENTS.

Table 21 shows the total wage and salary payments to each class of employes, by counties, the total being \$59,056,523.

Table 22 gives the classified weekly wages by counties grouped in certain wage range, showing the number in each group. The reports would indicate that about one-half of all employes of coal mines receive between \$35 and \$50 per week.

....*Table 23* gives similar information except grouped as to occupations.

Table 24 shows total wages and salaries paid each year from 1916 to 1921 inclusive.

UNEMPLOYMENT.

Table 25 shows the average number of days lost by each mine by counties, giving the principal causes for the shutdown, and it will be noted that an average of 130.8 days were lost by each mine because of "No Market."

LOCATION.

Table 26 gives the number of coal mines located on each railroad, by counties, showing the principal coal carrying roads in Ohio are the B. & O., H. V., and Penna. Of the 1,104 mines reporting, 36 are stripping operations and 383 wagon mines.

TABLE 1.

Coal Production by Counties for the Year Ending December 31, from 1916 to 1921 Inclusive With Comparative Data for the Years 1920-1921.

County.	Tons Produced.						Gain.		Loss.		
	1916	1917	1918	1919	1920	1921	Tons.	Per Cent.	Tons.	Per Cent.	
Athens	3,743,672	6,313,619	6,742,867	5,181,643	6,872,646	4,154,994	.....	.....	2,717,652	.....	39.5
Belmont	10,553,068	11,156,626	12,030,431	9,999,648	10,933,668	11,634,028	.....	.....	.....	.....	.....
Carroll	326,714	487,092	518,996	361,823	388,513	287,833	.....	.....	100,680	.....	25.9
Columbiana	518,862	616,925	738,473	650,971	957,811	566,830	.....	.....	390,931	.....	40.8
Coshocton	316,045	371,785	438,919	274,998	458,841	224,729	.....	.....	234,112	.....	51.0
Gallia	6,883	28,270	27,122	12,514	22,207	9,367	.....	.....	.....	.....	.....
Guernsey	4,397,262	4,024,265	4,497,303	3,342,915	3,760,463	2,983,094	.....	.....	777,429	.....	57.8
Harrison	990,641	1,222,561	1,772,870	1,452,061	1,917,607	1,879,116	.....	.....	38,491	.....	2.0
Hocking	1,435,188	2,211,858	2,332,304	1,162,366	1,855,499	567,704	.....	.....	1,287,795	.....	69.4
Holmes	14,826	20,144	13,431	11,512	9,645	9,484	.....	.....	161	.....	1.7
Jackson	727,999	1,016,249	1,018,063	478,474	841,314	187,886	.....	.....	653,428	.....	77.7
Jefferson	5,366,393	5,742,240	7,239,909	4,964,610	6,713,531	4,441,357	.....	.....	2,272,174	.....	33.8
Lawrence	166,261	241,333	322,917	140,433	236,399	58,731	.....	.....	227,668	.....	79.5
Licking .....	.....	.....	655	.....	.....	.....	.....	.....	.....	.....	.....
Mahoning	28,842	50,537	64,832	40,160	55,985	40,550	.....	.....	15,435	.....	27.6
Medina	9,205	10,088	7,353	5,249	6,652	2,404	.....	.....	4,248	.....	63.9
Meigs	1,025,036	1,267,144	1,373,144	877,516	1,539,162	941,773	.....	.....	597,389	.....	38.8
Monroe .....	.....	682	841	312	516	439	.....	.....	77	.....	14.9
Morgan	258,721	326,008	380,046	208,671	276,852	198,788	.....	.....	78,064	.....	28.2
Muskingum	396,289	541,261	671,666	399,364	669,960	193,920	.....	.....	476,040	.....	71.1
Noble	864,695	918,519	994,989	809,317	638,237	540,694	.....	.....	97,543	.....	15.5
Perry	1,195,127	2,445,114	3,514,841	2,580,890	3,700,511	1,600,510	.....	.....	2,100,001	.....	56.7
Pike .....	.....	.....	.....	.....	15	.....	.....	.....	15	.....	100.0
Portage	69,432	92,439	88,523	75,310	121,943	67,615	.....	.....	54,328	.....	44.6
Scioto	617	2,608	1,086	860	889	798	.....	.....	96	.....	10.8
Stark	335,487	471,034	535,423	325,923	498,118	310,120	.....	.....	187,998	.....	37.7
Summit	38,260	29,680	55,076	37,397	17,744	12,632	.....	.....	5,112	.....	28.8

Trumbull	1,116	1,266	1,750	1,347	2,614	813	.....	.....	1,801	68.9
Tuscarawas ...	1,547,110	1,788,800	2,120,887	1,595,620	2,231,345	1,207,139	.....	.....	1,024,206	45.9
Vinton	106,376	212,940	377,892	166,881	340,866	95,118	.....	.....	245,748	72.1
Washington ...	421	1,137	2,498	4,543	16,687	5,719	.....	.....	10,968	65.7
Wayne	84,996	65,762	33,410	62,580	70,837	18,687	.....	.....	52,150	13.6
State	34,526,552	41,677,986	47,919,202	35,225,908	45,237,077	52,242,857	.....	.....	12,984,220	.....
Net Loss .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Per Cent .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28.7

TABLE 2.

Coal Production for the Year Ending December 31, 1921, Classified According to Method of Production — By Counties.

County.	Tons.				Per Cent.		
	Pick Mined.	Machine Mined.	Stripped.	Total.	Pick Mined.	Machine Mined.	Stripped.
Athens	77,230	4,077,764	.....	4,154,994	1.9	98.1	.....
Belmont	219,873	11,397,757	16,898	11,634,028	2.0	97.9	0.1
Carroll	41,566	242,767	3,500	287,833	14.4	84.3	1.3
Columbiana	89,505	433,537	43,838	566,880	15.8	76.5	7.7
Coshocton	83,300	141,429	.....	224,729	37.1	62.9	.....
Gallia	9,367	.....	.....	9,367	100.0	.....	.....
Guernsey	22,224	2,900,560	60,250	2,983,034	0.8	97.2	2.0
Harrison	17,582	1,420,444	441,090	1,879,116	0.9	75.6	23.5
Hocking	49,480	518,224	.....	567,704	8.7	91.3	.....
Holmes	9,484	.....	.....	9,484	100.0	.....	.....
Jackson	89,914	97,972	.....	187,886	47.9	52.1	.....
Jefferson	81,804	3,913,333	446,220	4,441,357	1.8	88.1	10.1
Lawrence	54,913	3,818	.....	58,731	93.5	6.5	.....
Mahoning	26,522	13,624	404	40,550	65.4	33.6	1.0
Medina	2,404	.....	.....	2,404	100.0	.....	.....
Meigs	17,323	924,450	.....	941,773	1.8	98.2	.....
Monroe	439	.....	.....	439	100.0	.....	.....
Morgan .....	.....	198,788	.....	198,788	.....	100.0	.....
Muskingum	51,374	123,097	19,449	193,920	26.5	63.5	10.0
Noble	4,287	536,407	.....	540,694	0.8	99.2	.....
Perry	255,752	968,571	376,187	1,600,510	16.0	60.5	23.5
Portage	9,145	58,470	.....	67,615	13.5	86.5	.....
Scioto	793	.....	.....	793	100.0	.....	.....
Stark	167,961	141,514	655	310,120	54.2	45.6	0.2
Summit	12,632	.....	.....	12,632	100.0	.....	.....
Trumbull	813	.....	.....	813	100.0	.....	.....
Tuscarawas	272,092	882,946	52,101	1,207,139	22.5	73.2	4.8
Vinton	7,731	87,387	.....	95,118	8.1	91.9	.....
Washington	1,431	4,288	.....	5,719	25.0	75.0	.....
Wayne	4,187	14,500	.....	18,687	22.4	77.6	.....
State	1,681,118	29,101,647	1,480,092	32,242,857	5.2	90.3	4.5

TABLE 3

Annual Coal Production Classified According to Mining Methods, 1889 to 1921 Inclusive.

(The Bureau of Mines received no reports on mining methods prior to 1889. Practically the entire product reported to it annually from 1872 to 1888 was pick mined)

Year.	Tons.				Per Cent of Total Production		
	Pick Mined.	Machine Mined.	Stripped.	Total.	Pick Mined.	Machine Mined.	Stripped.
1889	10,007,885	90,000		10,907,885	91.7	8.3	
1890	10,640,360	1,148,499		11,788,859	90.3	9.7	
1891	11,896,106	1,654,081		13,550,187	87.3	12.7	
1892	12,860,828	2,239,080		14,999,908	84.7	15.3	
1893	12,275,023	2,553,074		14,828,097	82.8	17.2	
1894	9,354,753	2,555,466		11,910,219	78.5	21.5	
1895	10,563,423	3,120,456		13,683,879	77.2	22.8	
1896	9,544,259	3,368,349		12,912,608	73.9	26.1	
1897	8,342,696	4,106,124		12,448,822	67.0	33.0	
1898	8,805,557	5,252,598		14,058,155	62.6	37.4	
1899	9,167,874	6,741,080		15,908,954	57.6	42.4	
1900	9,966,872	9,457,777		19,424,649	51.3	48.7	
1901	9,831,476	10,489,814		20,321,290	48.4	51.6	
1902	10,489,619	13,489,648		23,979,267	43.8	56.2	
1903	10,012,335	14,560,381		24,572,716	40.7	59.3	
1904	8,037,360	16,516,455		24,553,815	32.7	67.3	
1905	6,825,125	19,009,532		25,834,657	26.4	73.6	
1906	6,500,263	20,713,232		27,213,495	23.9	76.1	
1907	6,511,773	25,854,176		32,365,949	20.1	79.9	
1908	4,676,869	21,610,931		26,287,800	17.8	82.2	
1909	4,608,402	23,146,630		27,755,032	16.6	83.4	
1910	4,341,483	30,082,468		34,424,951	12.6	87.4	
1911	1,467,119	28,874,920		30,342,039	11.4	88.6	
1912	3,739,536	30,074,755		33,814,291	10.9	89.1	
1913	3,691,923	32,593,545		36,285,468	10.2	89.8	
1914	2,586,408	16,008,558	a 141,446	18,736,412	13.8	85.4	a 0.8
1915	2,126,670	20,192,110	291,734	22,610,514	9.4	89.3	1.3
1916	2,414,367	31,579,032	533,153	34,526,552	7.0	91.5	1.5
1917	4,728,453	35,728,566	1,225,967	41,677,986	11.3	85.7	3.0
1918	5,140,405	40,039,873	2,738,924	47,919,202	10.7	83.6	5.7
1919	2,547,869	30,829,594	1,848,445	35,225,908	7.2	87.5	5.3
1920	4,337,601	37,230,703	3,658,773	45,227,077	9.6	82.3	8.1
1921	1,681,118	29,101,647	1,460,092	32,242,857	5.2	90.3	4.5

a Not separately reported in previous years.

b Includes 16,532 tons for which the method of production was not reported.

TABLE 4
Fluctuation of Coal Production in Ohio for the Year Ending December 31, 1921 — By Counties.

County.	Number of Mines Reporting.	Number of Tons Produced During the Month of												
		January.	Feb- ruary.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Athens	101	379,085	272,700	275,474	221,237	331,956	348,619	380,717	337,073	331,300	540,781	333,970	236,632	4,154,994
Belmont	131	930,153	866,710	866,710	846,131	1,163,069	1,130,022	1,045,537	1,083,841	946,316	1,123,711	932,997	799,663	11,634,023
Carroll	20	23,931	23,199	25,052	10,135	11,444	23,963	21,638	23,933	27,339	32,157	25,356	25,332	237,333
Columbiana	46	42,633	47,468	41,761	25,101	25,432	53,127	54,056	53,732	43,332	63,636	71,666	34,761	666,330
Coshocton	47	27,370	24,243	17,145	10,321	11,623	11,156	11,174	17,923	19,336	32,039	21,620	19,373	224,729
Gallia	16	593	669	433	110	334	333	321	1,139	1,129	1,133	933	633	9,337
Guernsey	46	239,113	201,337	166,033	113,249	335,739	339,731	233,337	234,737	237,033	349,030	230,274	209,013	2,933,034
Harrison	44	123,433	104,633	103,633	124,216	133,023	169,571	163,433	132,631	237,239	232,130	132,370	133,739	1,379,116
Hocking	39	64,330	40,732	33,731	24,023	33,343	40,372	43,332	63,333	32,343	30,336	41,631	33,733	337,704
Holmes	9	33,333	347	401	334	332	331	333	15,734	13,213	13,413	1,133	1,140	3,434
Jackson	51	23,337	13,214	13,747	8,434	11,336	11,473	13,213	15,734	13,103	13,413	14,233	11,349	137,336
Jefferson	33	414,123	330,633	313,243	233,327	403,434	404,373	401,633	422,333	341,233	433,339	373,333	343,411	4,411,337
Lawrence	22	3,032	6,346	3,301	3,211	3,332	4,373	3,333	4,331	6,073	5,033	4,333	3,133	33,731
Madison	19	3,200	3,379	2,243	1,337	1,337	1,374	1,374	3,331	4,023	4,430	5,030	3,133	33,731
Medina	3	233	301	142	142	233	133	133	3,333	333	333	133	133	3,404
Meigs	35	74,333	53,334	64,337	102,333	119,012	103,370	80,133	79,333	63,010	99,770	59,174	29,336	941,773
Monroe	1	30	47	32	.....	.....	.....	33	34	.....	33	33	33	33
Morgan	2	27,339	22,106	9,073	.....	13,333	13,371	16,749	10,333	11,333	33	33	33	103,733
Muskingum	46	26,531	17,334	11,447	4,333	11,333	13,423	12,333	20,373	13,333	20,033	21,173	13,237	133,330
Noble	13	40,732	31,104	20,337	17,103	30,239	70,330	70,330	37,373	33,333	37,373	23,723	13,316	340,334
Perry	94	227,630	133,014	146,334	107,343	117,073	163,333	33,333	119,333	112,343	133,343	127,344	110,223	1,000,310
Portage	4	7,332	3,344	4,737	2,119	3,433	2,333	3,333	7,333	7,377	11,344	5,333	3,731	37,313
Scioto	2	30	30	30	15,339	13,337	13,033	13,033	30,433	29,733	39,033	33,333	33	310,133
Stark	70	23,337	24,433	14,433	15,339	13,337	13,033	21,333	30,433	29,733	39,033	33,333	33	310,133
Summit	9	732	623	133	133	134	333	660	2,139	1,733	3,033	1,333	1,377	13,332
Trumbull	32	32	32	133	33	33	33	33	33	33	33	33	33	33
Tuscarawas	112	127,640	99,417	101,137	31,334	33,333	33,333	33,333	33,333	100,374	149,333	107,073	103,373	1,307,313
Vinton	11	9,733	5,131	7,343	9,141	7,433	9,133	6,133	11,073	3,333	3,133	4,073	3,333	33,313
Washington	4	439	339	333	40	433	43	433	433	333	333	333	333	3,313
Wayne	3	5,113	4,744	5,132	110	70	30	139	313	313	733	334	732	13,337
State	1,104	2,330,334	2,222,121	2,233,992	1,933,633	2,341,637	2,349,333	2,733,336	2,334,316	2,706,370	3,542,373	2,712,476	2,272,036	33,242,337

TABLE 5

Coal Production for the Year Ending December 31, 1921, Classified According to Disposition of Product—By Counties

County.	Total Production.	Number of Tons			
		Used in		Sold to	
		Operation of Mine.	Local Trade.	Mfg. Processes in Connection With Mine.	Shipping Trade.
Athens	4,154,994	94,566	40,848	4,755	4,014,825
Belmont	11,634,028	113,161	172,770	316,191	11,031,906
Carroll	287,833	7,013	4,023	43,069	233,728
Columbiana	566,880	9,145	83,614	27,132	446,969
Coshocton	224,729	1,800	41,382	1,917	179,630
Gallia	9,367	40	5,964	47	3,316
Guernsey	2,983,034	104,596	58,365	3,280	2,816,793
Harrison	1,879,116	36,574	23,476	.....	1,819,066
Hocking	567,704	3,254	3,353	24,612	536,485
Holmes	9,484	27	9,457	.....	.....
Jackson	187,886	8,186	17,682	48,381	113,637
Jefferson	4,441,357	58,377	165,532	133,749	4,083,699
Lawrence	58,731	1,222	32,129	13,519	11,861
Mahoning	40,550	1,349	38,463	.....	738
Medina	2,404	160	2,244	.....	.....
Meigs	941,773	29,811	19,236	.....	892,726
Monroe	439	8	431	.....	.....
Morgan	198,788	2,753	1,312	.....	194,723
Muskingum	193,920	3,473	54,646	9,691	126,110
Noble	540,694	18,119	10,051	.....	512,524
Perry	1,600,510	30,943	22,944	27,178	1,519,445
Portage	67,615	10,222	10,030	.....	47,368
Scioto	793	15	507	186	85
Stark	310,120	8,025	163,750	49,091	89,254
Summit	12,632	1,682	10,950	.....	.....
Trumbull	813	15	798	.....	.....
Tuscarawas	1,207,139	22,105	129,786	139,512	915,736
Vinton	95,118	3,473	343	7,149	84,153
Washington	5,719	16	2,352	.....	3,351
Wayne	18,687	1,001	3,636	.....	14,050
State	32,242,857	571,131	1,130,074	649,459	29,692,193

TABLE 6

Mining Machines — Number, Motive Power, and Production for the Year Ending
December 31, 1921 — By Counties

County.	Number of Mines in Which Machines Are Used.	Number of Machines Operated by		Total Number of Mining Machines Used.	Number of Tons Produced by		Total Tons Pro- duced by Mining Machines.
		Electricity.	Com- pressed Air.		Electric Machines.	Com- pressed Air Ma- chines.	
Athens	93	342		342	4,077,764		4,077,764
Belmont	97	671	1	672	11,390,610	1,147	11,397,757
Carroll	7	32		32	242,767		242,767
Columbiana	13	50		50	433,587		433,587
Coshocton	10	25		25	141,429		141,429
Guernsey	30	168		168	2,900,560		2,900,560
Harrison	13	83		83	1,420,444		1,420,444
Hocking	51	83		83	513,224		513,224
Jackson	11	24		24	97,972		97,972
Jefferson	45	292		292	3,913,333		3,913,333
Lawrence	1	1		1	3,818		3,818
Mahoning	4	4		4	13,624		13,624
Meigs	22	127		127	924,450		924,450
Morgan	2	17		17	193,788		193,788
Muskingum	10	29		29	123,067		123,067
Noble	4	31		31	536,407		536,407
Perry	63	183		183	908,571		908,571
Portage	2	4		4	58,470		58,470
Stark	6	11	1	12	133,568	2,916	141,514
Tuscarawas	35	105	5	110	873,237	9,709	882,946
Vinton	6	13		13	87,387		87,387
Washington	1	2		2	4,288		4,288
Wayne	1	3		3	14,500		14,500
State	527	2,300	7	2,307	29,087,875	13,772	29,191,647

TABLE 7

Mining Machines in Use and Average Number of Tons of Coal Cut Per Machine Per Year and Per Day, 1920 Compared With 1921 — By Counties.

County.	Number of Machines in Use.		Average Number of Tons Cut Per Ma- chine Per Year.		Average Number of Tons Cut Per Ma- chine Per Day.	
	1920	1921	1920	1921	1920	1921
Athens	333	342	20,349	11,923	119.0	113.5
Belmont	622	672	16,979	16,960	94.3	94.7
Carroll	21	32	13,370	7,586	68.9	47.4
Columbiana	50	50	15,600	8,671	66.9	68.3
Coshocton	24	25	11,337	5,657	61.6	60.8
Guernsey	149	168	23,865	17,265	137.1	129.9
Harrison	74	83	16,326	17,113	100.7	102.5
Hocking	111	83	15,123	693	87.4	9.4
Jackson	38	24	8,280	4,082	42.9	51.0
Jefferson	285	292	17,027	13,402	80.7	93.7
Lawrence	1	1	6,500	3,816	32.5	19.1
Mahoning	3	4	6,166	3,406	30.4	30.7
Meigs	157	127	9,037	7,279	52.2	58.2
Morgan	16	17	17,303	11,693	101.1	99.1
Muskingum	38	29	7,561	4,245	45.5	68.5
Noble	29	31	21,802	17,303	132.9	121.0
Perry	196	183	12,945	5,293	77.9	79.0
Portage	4	4	27,709	14,618	100.0	134.1
Stark	16	12	11,670	11,793	47.4	54.3
Tuscarawas	102	110	11,678	8,027	61.5	62.2
Vinton	25	13	9,044	6,722	51.1	45.4
Washington	4	2	3,645	2,144	20.8	9.1
Wayne	3	3	14,416	4,833	70.7	66.2
State	2,301	2,307	16,180	12,614	82.1	92.8

TABLE 8

Mining Machines in Use and Average Number of Tons of Coal Cut Per Machine Per Year and Per Day, 1904 to 1921, Inclusive.

Year.	Total Number of Mining Machines in Use.	Average Number of Tons Cut Per Machine Per Year.	Average Number of Tons Cut Per Machine Per Day.
1904	975	16,971	99.2
1905	1,146	16,588	95.9
1906	1,266	16,361	94.6
1907	1,396	18,520	89.9
1908	1,445	14,956	95.3
1909	1,395	16,593	97.0
1910	1,473	20,423	101.6
1911	1,542	17,429	100.2
1912	1,549	19,803	100.0
1913	1,653	19,718	96.7
1914	1,610	9,943	98.4
1915	1,443	13,978	102.0
1916	1,600	19,737	100.2
1917	1,743	20,495	100.5
1918	2,035	19,676	89.0
1919	2,060	14,966	93.5
1920	2,301	16,180	82.1
1921	2,307	12,614	92.8

TABLE 9

Haulage Methods in Coal Mines Reported in Operation During the Year Ending December 31, 1921—By Counties.

(Thirty-six stripping mines and three mines for which method of haulage was not reported, are not included in this table)

County.	Number of Mines Reporting Kind of Haulage	Number of Mines Having Each Specified Kind of Haulage.						
		Motor	Cable	Animal	Hand	Motor and Animal	Cable and Animal	Motor and Cable
Athens	101	35	1	40	1	24	.....	.....
Belmont	130	28	1	54	7	40	.....	.....
Carroll	19	5	.....	11	1	2	.....	.....
Columbiana ..	45	6	1	26	8	3	.....	1
Coshocton ..	47	5	1	30	7	3	1	.....
Gallia	16	.....	.....	4	12	.....	.....	.....
Guernsey	44	9	2	9	7	15	2	.....
Harrison	35	3	1	4	19	8	.....	.....
Hocking	59	6	.....	45	.....	8	.....	.....
Holmes	9	.....	.....	4	5	.....	.....	.....
Jackson	51	1	.....	34	10	6	.....	.....
Jefferson	69	13	.....	29	10	17	.....	.....
Lawrence	22	.....	.....	12	10	.....	.....	.....
Mahoning	18	.....	.....	14	4	.....	.....	.....
Medina	3	.....	.....	3	.....	.....	.....	.....
Meigs	35	13	.....	18	.....	4	.....	.....
Monroe	1	.....	.....	.....	1	.....	.....	.....
Morgan	2	2	.....	.....	.....	.....	.....	.....
Muskingum ..	43	2	.....	34	6	1	.....	.....
Noble	15	.....	.....	2	9	4	.....	.....
Perry	89	23	.....	52	6	8	.....	.....
Portage	4	.....	.....	2	1	1	.....	.....
Scioto	2	.....	.....	.....	2	.....	.....	.....
Stark	69	1	.....	39	28	1	.....	.....
Summit	5	.....	.....	3	2	.....	.....	.....
Trumbull	1	.....	.....	.....	1	.....	.....	.....
Tuscarawas ..	110	8	3	78	6	10	5	.....
Vinton	11	1	.....	7	1	2	.....	.....
Washington ..	4	.....	.....	2	2	.....	.....	.....
Wayne	6	.....	.....	4	2	.....	.....	.....
State	1,065	161	10	560	168	157	8	1

TABLE 10

Character of Openings of Coal Mines Reported in Operation During the Year
Ending December 31, 1921 — By Counties.

(Thirty-six stripping mines and two mines for which the kind of opening was not reported,
are not included in this table)

County.	Total Number of Mines Reporting Kind of Opening.	Number of Mines Having Each Specified Kind of Opening.		
		Drift	Slope	Shaft
Athens	101	60	18	23
Belmont	190	96	25	9
Carroll	19	14	4	1
Columbiana	45	29	10	6
Coshocton	47	39	8	.....
Gallia	16	15	1	.....
Guernsey	44	14	9	21
Harrison	35	30	4	1
Hocking	59	56	3	.....
Holmes	9	9	.....	.....
Jackson	51	41	3	7
Jefferson	69	56	5	8
Lawrence	22	22	.....	.....
Mahoning	18	4	10	4
Medina	3	.....	3	.....
Meigs	35	30	3	2
Monroe	1	.....	1	.....
Morgan	2	1	1	.....
Muskingum	43	33	10	.....
Noble	15	11	.....	4
Perry	90	67	17	6
Portage	4	1	.....	3
Scioto	2	2	.....	.....
Stark	69	47	11	11
Summit	5	1	1	3
Trumbull	1	.....	.....	1
Tuscarawas	110	97	12	1
Vinton	11	9	1	1
Washington	4	.....	3	1
Wayne	6	1	2	3
State	1,066	785	165	116

TABLE 11

Ventilation Methods in Coal Mines Reported in Operation During the Year Ending December 31, 1921—By Counties.

(Thirty-six stripping mines and two mines for which the kind of ventilation was not reported, are not included in this table)

County.	Total Number of Mines Reporting Kind of Ventila- tion.	Number of Mines Having Each Specified Kind of Ventilation.					
		Fan.	Fire Basket.	Furnace.	Exhaust Steam.	Natural	Combina- tion of Two or More Pre- ceding Methods.
Athens	101	78				20	3
Belmont	130	95	3	20		9	3
Carroll	19	11		3		1	4
Columbiana	45	16		2		26	1
Coshocton	47	9		12		24	2
Gallia	16		1	2		13	
Guernsey	44	31		2		11	
Harrison	35	15		1		18	1
Hocking	59	25		1		26	7
Holmes	9			3		5	1
Jackson	51	17	3	15		14	2
Jefferson	69	48	2	9		7	3
Lawrence	22	1		9		10	2
Mahoning	18	7				8	3
Medina	3					3	
Meigs	35	18		3		10	4
Monroe	1			1			
Morgan	2	2					
Muskingum	43	13	1	4		25	
Noble	15	4				11	
Perry	90	59	2	4		21	4
Portage	4	2				1	1
Scioto	2			2			
Stark	69	17	1	10	3	35	3
Summit	5	2			2		1
Trumbull	1					1	
Tuscarawas	110	52	3	22		29	4
Vinton	11	8		1		1	1
Washington	4	1		2		1	
Wayne	6	3					3
State	1,066	534	16	128	5	330	53

TABLE 12.
Average Number of Employees in Pick, Machine and Stripping Mines, 1921 Compared With 1920—By Counties.

County.	In Pick Mines.		In Machine Mines.		In Stripping Mines.		Total.		Gain in Total Employees.		Loss in Total Employees.	
	1920	1921	1920	1921	1920	1921	1920	1921	Number	Per Cent	Number	Per Cent
Athens	102	64	8,280	8,530	112	60	8,382	8,594	212	2.5		
Belmont	298	141	11,350	13,998	112	60	11,760	14,199	2,439	20.7		
Carroll	175	113	411	457		15	586	585			1	a
Columbiana	273	200	914	1,047	34	34	1,221	1,281	60	a		
Coshocton	315	222	413	522			728	744	16	a		
Gallia	64	26					64	26			38	a
Guernsey	181	71	4,020	4,437	41	42	4,242	4,550	308	7.3		
Harrison	90	54	1,439	1,630	511	466	2,040	2,150	110	5.4		
Hocking	99	48	2,040	1,676			2,139	1,724			415	19.4
Holmes	38	29					38	29			9	a
Jackson	889	318	844	617			1,733	935			798	46.0
Jefferson	283	177	5,087	5,858	1,090	482	6,460	6,517	57	a		
Lawrence	492	278	24	27			516	305			211	40.9
Mahoning	83	100	44	66	b	3	127	169	42	a		
Medina	14	10					14	10			4	a
Meigs	165	35	2,395	2,101			2,560	2,136			424	16.6
Monroe	3	3					3	3				
Morgan			539	447			539	447			92	17.1
Muskingum	345	173	521	420	77	47	943	640			303	32.1
Noble	18	21	708	827			726	848	122	16.8		
Perry	489	154	3,697	3,804	338	264	4,524	4,222			302	6.7
Pike	5						5				5	a
Portage	9	8	146	163			155	171	16	a		
Scioto	4	2					4	2			2	a
Stark	563	553	344	246	3	4	910	803			107	11.8
Summit	66	88					66	88	22	a		
Trumbull	6	4					6	4			2	a
Tuscarawas	841	527	1,620	1,793	204	124	2,665	2,444			221	8.3

TABLE 13

Average Number and Per Cent of Employees Reported Annually in Pick, Machine and Stripping Mines — 1904 to 1921, Inclusive.

Year.	Average Number of Employees.				Per Cent of Total Employees.		
	In Pick Mines.	In Machine Mines.	In Stripping Mines.	Total.	Pick.	Machine	Stripping.
1904	17,723	28,111	.....	45,834	38.7	61.3	.....
1905	14,138	30,055	.....	44,193	32.0	68.0	.....
1906	13,128	33,373	.....	46,501	28.2	71.8	.....
1907	12,927	34,949	.....	47,876	27.0	73.0	.....
1908	11,938	38,330	.....	50,267	23.7	76.3	.....
1909	10,334	36,685	.....	47,019	22.0	78.0	.....
1910	9,607	39,223	.....	48,830	19.7	80.3	.....
1911	7,744	40,633	.....	48,407	16.0	84.0	.....
1912	7,841	39,393	.....	47,234	16.6	83.4	.....
1913	7,303	41,117	.....	48,420	15.1	84.9	.....
1914	5,143	41,822	.....	46,965	11.0	89.0	.....
1915	3,882	37,548	.....	41,430	9.4	90.6	.....
1916	3,511	38,121	.....	41,632	8.4	91.6	.....
1917	6,923	42,996	.....	49,919	13.9	86.1	.....
1918	6,776	44,497	(a) 1,819	53,092	12.8	83.8	3.4
1919	4,833	44,036	1,608	50,477	9.6	87.2	3.2
1920	6,175	45,512	2,410	54,097	11.4	84.1	4.5
1921	3,533	49,015	1,541	54,089	6.5	90.6	2.9

(a) Average number of employees in stripping mines was not shown previous to 1918.

TABLE 14

Average Number of Employees in Pick Mines by Occupations, 1920 Compared With 1921 — By Counties.

County.	Pick Miners.		Inside Day Hands.		Outside Day Hands.		Total.	
	1920	1921	1920	1921	1920	1921	1920	1921
Athens	84	48	7	6	11	10	102	64
Belmont	207	114	42	16	49	11	298	141
Carroll	105	84	42	21	28	8	175	113
Columbiana	221	152	29	28	23	20	273	200
Coshocton	227	162	62	45	26	15	315	222
Gallia	48	23	8	.....	8	3	64	26
Guernsey	115	50	34	7	32	14	181	71
Harrison	74	48	9	3	7	3	90	54
Hocking	81	41	10	4	8	3	99	48
Holmes	33	28	2	1	3	.....	38	29
Jackson	606	232	155	52	128	34	889	318
Jefferson	172	145	45	16	66	16	283	177
Lawrence	329	194	77	53	86	31	492	278
Mahoning	68	85	8	8	7	7	83	100
Medina	9	6	4	4	1	.....	14	10
Meigs	122	30	22	2	21	3	165	35
Monroe	3	3	.....	.....	.....	.....	3	3
Morgan .....	.....	.....	.....	.....	.....	.....	.....	.....
Muskingum	258	143	45	16	42	14	345	173
Noble	18	21	.....	.....	.....	.....	18	21
Perry	341	114	79	23	69	17	489	154
Pike	2	.....	.....	.....	3	.....	5	.....
Portage	4	6	3	1	2	1	9	8
Scioto	4	2	.....	.....	.....	.....	4	2
Stark	389	382	87	85	87	86	563	553
Summit	43	62	7	14	16	12	66	88
Trumbull	6	3	.....	.....	.....	1	6	4
Tuscarawas	598	381	134	92	109	54	841	527
Vinton	113	55	37	14	34	13	184	82
Washington	8	6	.....	2	.....	2	8	10
Wayne	47	16	13	1	13	5	73	22
State	4,335	2,636	961	514	879	383	6,175	3,533

TABLE 15.
Average Number of Employees in Machine Mines by Occupations 1920 Compared With 1921 — By Counties.

County.	Machine Run- ners and Helpers.		Loaders (In- cluding Drillers and Shooters.)		Pick Miners in Machine Mines.		Inside Day Hands.		Outside Day Hands.		Total.	
	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921	1920	1921
Athens	574	581	4,716	5,182	68	138	1,881	1,697	1,041	932	8,280	8,530
Belmont	1,020	1,172	5,990	8,360	138	172	2,638	2,866	1,564	1,428	11,350	13,998
Carroll	39	49	200	247	7	5	88	102	77	54	411	457
Columbiana	88	85	485	596	.....	10	231	241	110	115	914	1,047
Coshocton	38	48	179	259	24	22	107	129	65	64	413	522
Guernsey	291	310	2,054	2,438	26	.....	1,236	1,324	413	365	4,020	4,437
Harrison	121	124	712	924	8	.....	347	364	251	218	1,439	1,630
Hocking	180	154	1,107	966	71	67	395	289	287	200	2,040	1,676
Jackson	70	43	311	276	72	70	259	146	132	82	844	617
Jefferson	460	509	2,507	3,356	45	41	1,294	1,258	781	694	5,087	5,858
Lawrence	2	2	6	25	6	.....	1	.....	9	.....	24	27
Lawrence	6	8	17	33	2	2	11	12	8	11	44	66
Meigs	167	155	1,249	1,202	10	.....	599	468	370	276	2,395	2,101
Morgan	33	38	210	265	.....	.....	246	100	50	44	539	447
Muskingum	58	48	259	259	26	.....	103	77	75	36	521	420
Noble	44	56	361	453	.....	.....	250	258	53	60	708	827
Perry	321	291	1,950	1,899	133	545	771	669	522	400	3,697	3,804
Portage	8	8	62	72	6	10	37	40	33	33	146	163
Stark	28	23	162	156	42	.....	63	46	49	22	344	246
Tuscarawas	171	202	709	921	66	36	416	380	258	254	1,620	1,793
Vinton	48	25	258	163	34	5	111	48	117	39	568	280
Washington	4	2	16	6	.....	.....	12	.....	16	2	48	10
Wayne	8	7	23	20	.....	.....	15	20	14	12	60	59
State	3,779	3,959	23,543	28,078	784	1,123	11,111	10,534	6,295	5,341	45,512	49,015

TABLE 16

Average Number of Days Worked Per Year by Pick Miners in Pick Mines, Loaders (Including Drillers and Shooters) in Machine Mines, and Employees of Stripping Mines, 1920 Compared With 1921 — By Counties.

County.	Average Number of Days Worked By					
	Pick Miners in Pick Mines.		Loaders (Including Drillers and Shooters in Machine Mines.		Employees of Stripping Mines.	
	1920	1921	1920	1921	1920	1921
Athens	139	37	171	105	.....	.....
Belmont	164	145	180	179	195	55
Carroll	231	150	194	160	.....	50
Columbiana	169	165	233	127	310	310
Coshocton	202	116	184	93	.....	.....
Gallia	153	142	.....	.....	.....	.....
Guernsey	180	132	174	133	120	70
Harrison	179	160	162	167	215	114
Hocking	163	97	173	74	.....	.....
Holmes	152	164	.....	.....	.....	.....
Jackson	174	94	193	80	.....	.....
Jefferson	177	150	211	143	232	72
Lawrence	201	76	200	200	.....	.....
Mahoning	214	186	208	111	.....	18
Medina	295	184	.....	.....	.....	.....
Meigs	194	125	173	125	.....	.....
Monroe	128	156	.....	.....	.....	.....
Morgan .....	.....	.....	171	118	.....	.....
Muskingum	171	106	166	62	117	107
Noble	147	137	164	143	.....	.....
Perry	140	58	166	67	230	83
Pike	60	.....	.....	.....	.....	.....
Portage	167	160	277	109	.....	.....
Scioto	104	250	.....	.....	.....	.....
Stark	189	126	246	217	115	160
Summit	132	47	.....	.....	.....	.....
Trumbull	240	200	.....	.....	.....	.....
Tuscarawas	193	133	190	129	184	61
Vinton	162	34	177	148	.....	.....
Washington	113	238	175	236	.....	.....
Wayne	182	136	204	73	.....	.....
State	179	89	197	136	218	91

TABLE 17

Average Number of Days Worked Per Year by Pick Miners in Pick Mines, by Loaders, (Including Drillers and Shooters) in Machine Mines and by Employees in Stripping Mines—1904 to 1921 Inclusive.

(Pick miners employed in machine mines are not included in this table)

Year.	Average Number of Days Worked by		
	Pick Miners in Pick Mines.	Loaders (In- cluding Drillers and Shooters in Machine Mines.	Employees of Stripping Mines.
1904	159	169	.....
1905	169	169	.....
1906	176	173	.....
1907	191	201	.....
1908	160	157	.....
1909	182	172	.....
1910	168	209	.....
1911	168	175	.....
1912	173	199	.....
1913	189	206	.....
1914	150	101	.....
1915	168	137	.....
1916	182	197	.....
1917	188	204	.....
1918	205	221	(a) 232
1919	148	160	164
1920	179	197	218
1921	89	136	91

(a) Previous to 1918 average number of days worked by employees of stripping mines was not shown.

TABLE 18
Fluctuation in Number of Employees in Coal Mines (Including Stripping Mines) Reported in Operation During the Year Ending December 31, 1921—By Counties.

(Forty-seven mines in which the owners did their own work and four mines for which incomplete data were furnished, are not included in this table).

County.	Number of Mines Reporting.	Number of Employees on the Payroll Nearest the Fifteenth of												Variation From Maximum.	
		Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.		No.	Per C.
Athens	100	7,234	5,894	5,996	4,899	5,758	6,400	6,623	6,916	7,090	7,527	7,571	6,673	2,672	35.3
Belmont	130	12,542	12,066	12,336	12,066	12,752	12,570	12,890	13,096	12,418	12,987	13,013	11,915	1,181	9.0
Carroll	20	642	532	433	532	527	471	392	457	466	468	499	486	315	53.1
Columbiana	44	921	1,115	1,096	629	822	864	927	968	965	1,013	1,123	933	499	44.2
Coshocton	44	603	576	438	396	304	311	266	363	431	521	544	494	337	53.8
Galena	9	16	13	12	12	13	14	30	26	25	22	20	16	14	9.7
Garrison	40	4,369	4,329	4,010	3,975	3,973	4,024	4,020	4,034	4,013	4,399	4,260	4,204	426	8.8
Harrison	43	1,980	1,696	1,621	1,623	1,564	1,821	1,912	1,954	2,089	2,201	2,176	2,056	680	30.9
Hocking	57	1,580	1,376	1,351	1,049	1,006	1,997	1,801	1,860	1,800	1,863	1,164	1,081	583	36.8
Holmes	9	29	23	17	16	16	16	12	24	29	33	32	30	21	23.6
Jackson	46	816	690	654	450	273	322	474	439	488	514	503	503	543	66.5
Jefferson	80	5,460	5,381	5,061	5,074	5,230	5,213	5,132	5,247	5,264	5,367	5,673	5,457	622	10.9
Lawrence	22	298	160	116	96	96	103	119	110	134	133	109	90	206	69.7
Mahoning	18	164	136	98	53	65	57	53	84	124	136	148	154	109	66.4
Medina	3	11	8	7	4	10	12	6	6	6	6	6	5	7	a
Meigs	35	1,963	1,651	1,500	1,409	1,548	1,790	1,447	1,065	1,464	1,273	1,543	806	1,157	58.9
Monroe	1	3	2	2	.....	.....	3	3	3	3	3	2	3	1	a
Morgan	2	374	396	228	13	206	285	292	297	417	447	451	234	488	97.1
Muskingum	43	671	471	358	199	525	360	328	350	486	382	411	349	472	70.3
Noble	12	785	742	797	814	763	797	786	797	790	807	782	756	79	9.7
Perry	89	3,560	2,852	2,557	2,134	1,706	1,865	1,676	1,683	2,259	2,431	2,570	2,323	1,894	62.9
Portage	3	171	174	180	164	164	163	172	174	166	177	172	112	63	37.7
Scioto	1	2	3	3	1	1	1	2	3	3	3	3	2	2	a
Stark	66	563	561	531	519	463	484	502	577	600	589	647	637	194	34.4
Summit	5	31	29	27	5	53	56	51	53	52	61	56	58	56	91.8
Trumbull	1	3	3	3	3	3	3	3	4	4	4	4	4	1	a
Tuscarawas	111	2,177	2,034	1,840	1,745	1,647	1,655	1,632	1,479	1,673	1,963	2,006	1,850	996	46.5
Vinton	11	410	182	211	181	223	317	293	299	217	262	174	127	273	65.6
Washington	3	14	17	14	11	15	8	11	20	22	26	24	16	16	57.6
Wayne	5	70	64	63	.....	.....	6	5	11	22	36	25	25	65	92.8
State	1,063	47,196	43,223	41,500	37,796	39,263	40,975	41,129	41,979	43,013	45,249	45,719	41,464	9,400	19.9

a Not computed, owing to small number represented.

TABLE 19
Average Number of Tons of Coal Produced Per Year and Per Day Per Employee in Certain Specified Occupations, 1921 Compared With 1920—By Counties.
(Pick miners employed in machine mines and mines in which owners did their own work and mines for which no data were given are not included in this table.)

County.	Pick Mines.			Machine Mines.						Stripping Mines.		
	Pick Miners.			Runners and Helpers.			Drillers and Loaders (In- cluding Shooters).			Outside Employees.		
	Average Number of Tons Mined Per Day.			Average Number of Tons Cut Per Day. ^a			Average Number of Tons Loaded Per Year.			Average Number of Tons Produced Per Year.		
	1920	1921		1920	1921		1920	1921		1920	1921	
Athens	501	171	3.6	11,711	7,017	68.4	1,425	787	8.3	1,425	787	7.5
Belmont	660	563	4.0	10,346	9,725	57.5	1,762	1,893	9.7	1,762	1,893	7.6
Carroll	928	490	4.0	7,199	4,954	37.1	1,404	983	7.2	1,404	983	6.1
Columbiana	586	559	3.5	8,864	5,100	38.0	1,608	727	6.9	1,608	727	5.7
Coschocton	733	392	3.6	7,161	2,946	38.9	1,520	546	8.3	1,520	546	5.9
Gallia	435	360	2.8	12,220	9,351	70.2	1,731	1,189	9.9	1,731	1,189	8.9
Guernsey	891	392	5.0	9,865	11,455	61.6	1,097	1,587	10.5	1,097	1,587	9.2
Harrison	528	358	2.9	9,865	8,325	53.9	1,516	580	8.8	1,516	580	7.2
Hocking	1,034	596	6.3	9,325	3,325	53.9	1,516	580	8.8	1,516	580	7.2
Holmes	289	339	1.9	2,1								
Jackson	738	333	4.2	4,495	2,278	23.3	1,012	355	5.2	1,012	355	4.4
Jefferson	1,015	444	5.7	10,549	7,688	50.0	1,935	1,166	9.2	1,935	1,166	8.2
Lawrence	824	232	4.1	3,250	1,909	16.3	1,083	413	5.4	1,083	413	3.7
Mahoning	511	304	2.4	3,063	1,708	15.2	1,083	413	5.4	1,083	413	3.7
Madison	739	401	2.5	2,2								
Meigs	845	577	4.4	8,423	5,964	48.7	1,126	769	6.5	1,126	769	6.2
Monroe	172	146	1.3									
Morgan				8,389	5,231	49.1	1,318	750	7.7	1,318	750	6.4
Muskingum	846	354	4.9	4,954	2,595	29.8	1,109	476	6.7	1,109	476	7.7
Noble	294	189	2.0	14,370	9,579	87.6	1,752	1,154	10.7	1,752	1,154	8.3
Perry	940	396	7.1	7,861	3,820	47.4	1,294	1,509	7.8	1,294	1,509	7.6
Pike			b									
Portage	8											
Scioto	676	717	4.0	13,855	7,309	50.0	1,787	812	6.5	1,787	812	7.4
Stark	222	296	2.1	1,2								
Summit	666	430	3.5	6,432								
Summit	413	204	3.1	6,068	6,432	27.1	1,152	907	4.7	1,152	907	4.2
			4.3			29.6			4.7			b

TABLE 20

Average Number of Tons of Coal Produced Per Year and Per Day Per Employee in Specified Occupations, 1895 to 1921 Inclusive.

Year.	Pick Mines.		Machine Mines.				Stripping Mines.	
	Pick Miners.		Runners and Helpers		Loaders (including Drillers and Shooters).		Outside Employees ^c	
	Average Number of Tons Mined Per Year.	Average Number of Tons Mined Per Day.	Average Number of Tons Cut Per Year.	Average Number of Tons Cut Per Day. ^a	Average Number of Tons Loaded Per Year.	Average Number of Tons Loaded Per Day.	Average Number of Tons Produced Per Year.	Average Number of Tons Produced Per Day.
1895	568	3.4	6,981	44.7	925	5.9		
1896	431	2.9	5,817	40.4	775	5.4		
1897	509	3.4	5,610	41.6	821	6.1		
1898	546	3.6	6,524	38.2	892	5.2		
1899	443	2.9	8,016	43.6	1,070	6.3		
1900	411	2.4	8,467	47.4	1,128	6.3		
1901	395	2.2	6,247	34.3	1,155	6.4		
1902	380	2.2	9,478	49.9	1,212	6.4		
1903	640	3.6	7,471	39.3	1,027	5.4		
1904	602	3.8	7,204	42.0	684	4.0		
1905	653	3.9	7,255	41.8	686	4.0		
1906	661	3.8	7,155	41.4	991	5.7		
1907	676	3.5	8,725	42.4	1,187	5.8		
1908	518	3.2	6,823	43.5	899	5.5		
1909	595	3.3	7,327	42.8	972	5.7		
1910	602	3.6	9,136	45.5	1,195	5.7		
1911	597	3.6	7,904	45.4	1,015	5.8		
1912	641	3.7	8,840	44.6	1,218	6.1		
1913	681	3.6	8,690	42.6	1,260	6.1		
1914	508	3.3	a 4,564	a45.2	622	6.1		
1915	591	3.5	a 6,395	a46.7	841	6.1		
1916	659	3.6	a 9,966	a50.6	1,859	6.9		
1917	733	3.9	a 9,402	a46.1	1,494	7.3		
1918	821	4.0	a10,895	a49.3	1,770	7.7	b1,506	b 6.5
1919	582	3.9	a 8,394	a52.5	1,284	8.0	b1,150	b 7.0
1920	786	4.4	a 9,828	a50.0	1,577	8.0	b1,518	b 6.9
1921	421	4.7	a 7,385	a54.3	1,036	7.6	b 948	b10.4

^a The tonnage per day, 1914 to 1921 inclusive, for machine runners and helpers is computed on the assumption that they worked the same number of days as did the loaders in their respective mines.

^b Previous to 1918 average number of tons produced by employees of stripping mines was not shown.

^c All employees of stripping mines are classified as outside help.

TABLE 21

Total Wage and Salary Payments to Each Class of Employees for the Year Ending December 31, 1921 — By Counties.

(Forty-seven mines in which the owners did their own work and four mines for which incomplete data were furnished are not included in this table)

County.	Total Number of Mines Reporting.	Aggregate Wage and Salary Payments.						Total.
		To Pick Miners.	To Machine Runners and Helpers.	To Loaders (Including Drillers and Shooters.)	To Inside Day Em- ployes.	To Outside Day Em- ployes.	To Office Help.	
Athens	100	90,873	671,946	3,686,095	1,964,721	1,204,577	110,978	7,729,190
Belmont	130	268,532	1,909,457	9,997,876	5,017,149	2,511,673	180,406	19,885,393
Carroll	20	78,358	146,712	199,585	122,332	41,833	9,367	598,187
Columbiana	44	128,007	119,098	406,224	335,515	182,702	9,560	1,181,106
Coshocton	44	114,721	28,910	137,177	171,531	62,018	3,585	517,492
Gallia	9	15,201	.....	.....	.....	820	.....	16,021
Guernsey	40	26,826	475,755	2,555,367	2,022,698	725,914	125,332	5,931,892
Harrison	43	25,869	389,981	1,189,232	734,840	760,561	42,084	3,142,567
Hocking	57	58,111	99,108	542,377	255,537	174,537	18,413	1,148,083
Holmes	9	16,799	.....	.....	198	.....	.....	16,997
Jackson	46	122,420	20,418	97,488	114,984	79,731	9,109	444,150
Jefferson	80	115,582	694,331	3,480,595	2,154,029	1,402,610	127,797	7,974,994
Lawrence	22	72,132	975	17,839	10,127	5,859	7,071	114,133
Mahoning	18	46,477	5,047	14,388	16,456	13,322	1,075	95,785
Medina	3	5,621	.....	.....	4,255	.....	.....	9,876
Meigs	35	18,017	185,471	881,863	582,273	294,224	30,047	1,991,896
Monroe	1	110	.....	.....	.....	.....	.....	110
Morgan	2	.....	36,353	187,809	100,089	66,146	6,028	396,425
Muskingum	43	77,409	32,768	108,628	65,734	92,725	9,599	326,863
Noble	12	5,001	79,885	461,152	378,409	119,049	16,399	1,059,895
Perry	89	162,415	179,061	873,977	651,993	834,061	41,285	2,762,782
Portage	3	15,066	14,804	64,655	51,208	62,588	6,510	214,816
Scioto	1	1,200	.....	.....	.....	.....	.....	1,200
Stark	66	248,112	32,806	154,971	146,118	90,485	15,781	683,333
Summit	5	18,833	.....	.....	8,646	8,491	.....	85,970
Trumbull	1	2,185	.....	.....	.....	965	.....	3,180
Tuscarawas	111	358,566	249,268	757,388	627,399	420,702	45,176	2,453,499
Vinton	11	10,217	19,266	86,695	37,851	30,177	7,382	191,088
Washington	3	3,470	2,477	56	6,231	1,891	.....	14,125
Wayne	5	5,938	3,995	14,648	15,290	10,275	.....	50,046
State	1,053	2,127,368	5,397,992	25,916,085	15,594,108	9,197,986	822,984	59,066,523

TABLE 22

Classified Weekly Wages of Employees in and Around Coal Mines (Including Stripping Mines) for the Week of Greatest Employment During the Year Ending December 31, 1921 — By Counties.

County.	Number Receiving Each Classified Weekly Wage.														Total.
	Under \$6	\$6 but under \$7	\$7 but under \$8	\$8 but under \$9	\$9 but under \$10	\$10 but under \$11	\$11 but under \$12	\$12 but under \$13	\$13 but under \$14	\$14 but under \$15	\$15 but under \$16	\$16 but under \$17	\$17 but under \$18	\$18 but under \$19	
Athens	14	6	23	60	113	212	159	484	293	796	793	909	4,384	1,257	9,373
Belmont	36	15	22	14	13	65	159	338	560	696	1,032	1,082	7,907	2,025	15,275
Carroll	1	3	3	3	2	4	19	49	12	159	139	159	146	63	1,279
Columbia	3	1	3	3	1	5	11	22	45	127	226	253	542	169	1,435
Coshocton .....	...	2	...	1	...	2	5	36	37	86	173	92	343	26	1,320
Gallia .....	...	...	...	...	...	4	4	6	1	7	9	...	...	...	29
Guernsey .....	...	2	1	3	1	6	6	58	52	76	110	144	3,660	541	4,633
Harrison	3	1	4	3	4	14	14	103	120	243	207	218	1,031	645	2,410
Hocking	9	3	19	11	9	25	77	65	80	71	166	177	844	223	1,779
Holmes .....	...	...	...	...	...	1	10	7	3	4	7	3	...	...	36
Jackson .....	...	...	1	...	1	10	70	87	78	164	140	161	233	83	1,033
Jefferson .....	...	5	6	4	13	21	46	143	273	426	541	935	8,604	1,829	7,949
Lawrence	4	...	...	1	...	1	14	58	53	44	27	27	74	18	7,821
Mahoning .....	...	...	...	...	...	...	5	12	10	23	28	38	33	37	197
Medina	5	7	9	10	15	65	67	65	88	325	135	294	1,824	274	2,673
Meigs .....	...	...	...	...	...	...	...	3	...	...	...	...	...	...	12
Monroe .....	...	...	...	...	...	...	11	16	27	39	62	115	182	41	504
Morgan .....	...	...	...	1	4	7	9	47	46	164	126	62	211	101	799
Muskingum .....	...	...	...	...	...	...	2	20	16	1	7	1	700	68	875
Noble .....	...	...	...	...	...	...	...	98	336	254	306	547	1,623	314	4,133
Perry	7	6	10	7	5	28	87	...	...	...	5	6	123	35	1,173
Portage .....	...	...	...	...	...	...	...	...	...	3	...	...	...	...	8
Scioto .....	...	...	...	...	...	...	...	...	...	4	...	...	...	...	8
Stark .....	...	...	...	2	3	19	20	27	59	67	172	117	336	84	903
Summit .....	...	...	...	...	...	1	11	5	6	6	26	7	16	8	96
Tribull .....	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4
Tuscarawas	3	...	1	2	2	...	15	38	76	252	371	437	1,298	276	2,715
Vinton .....	...	...	3	4	1	5	7	16	3	129	56	55	83	12	2,834
Washington .....	...	...	...	...	...	...	...	2	13	8	5	5	...	...	27
Wayne	2	...	...	...	1	...	4	4	9	2	6	9	27	25	80
State	87	51	102	128	188	505	886	1,868	2,301	4,115	4,568	6,727	23,160	9,064	58,990

TABLE 23
Classified Weekly Wages of Employees in and Around Mines (Including Stripping Mines) for the Week of Greatest Employment During the Year Ending December 31, 1921—By Occupations.

Occupation Group.	Number Receiving Each Classified Weekly Wage.													Total.
	Under \$6	\$6 but under \$7	\$7 but under \$8	\$8 but under \$9	\$9 but under \$10	\$10 but under \$12	\$12 but under \$15	\$15 but under \$18	\$18 but under \$21	\$21 but under \$25	\$25 but under \$30	\$30 but under \$35	\$35 but under \$50 or over.	
Wage Earners —														
Pick Miners ^a	9	8	6	14	10	52	140	270	308	496	651	495	925	3,852
Machine Runners and Helpers.....				3	2	16	11	45	48	98	213	346	1,341	4,132
Loaders, (including Drillers and Shooters)	39	31	44	55	148	331	490	1,100	1,395	2,321	2,569	3,441	14,853	30,615
Other Inside Employees.....	10	7	22	13	11	48	102	241	191	649	680	1,137	7,119	11,747
Outside Employees ^b	13	2	27	11	13	47	73	181	385	516	651	1,244	3,793	8,057
Total	76	48	99	126	134	494	816	1,837	2,278	4,075	4,764	6,663	28,081	58,408
Office Help —														
Males	6	2	2	.....	3	7	8	11	6	22	37	51	101	304
Females	5	1	1	2	1	4	12	20	17	13	57	13	23	194
Total	11	3	3	2	4	11	20	31	23	40	94	64	129	537
Grand Total	87	51	102	128	138	505	836	1,868	2,301	4,115	4,858	6,727	28,100	58,990

^a This table includes pick miners in both pick and machine mines.

^b This classification includes employees of stripping mines.

TABLE 24.

Total Wage and Salary Payments of Coal Mines Reporting from 1916 to 1921 Inclusive.

Year.	Total Number of Mines Reporting.	Aggregate Wage and Salary Payments.							Total.
		To Pick Miners.	To Machine Runners and Helpers.	To Loaders (Including Drillers and Shooters).	To Inside Day Em- ployes.	To Outside Day Em- ployes.	To Wage Earners.	To Office Help.	
1916 ^a	780	.....	.....	.....	.....	.....	\$27,478,784	\$331,750	\$27,810,534
1917	1,209	.....	.....	.....	.....	.....	44,245,175	697,175	44,942,666
1918	1,336	.....	.....	.....	.....	.....	65,199,723	993,803	66,187,526
1919	1,166	\$2,866,613	\$4,396,991	\$20,693,066	\$11,820,037	\$8,604,543	.....	660,558	49,041,808
1920	1,343	6,100,522	6,956,540	32,814,442	20,170,784	15,157,784	.....	1,021,923	82,221,639
1921	1,053	2,127,363	5,397,992	25,916,087	15,594,108	9,197,986	.....	822,984	59,056,523
State	6,896	\$11,094,503	16,751,523	\$79,423,593	\$47,584,929	\$32,960,007	\$136,917,682	\$4,528,193	\$329,260,746

^a Previous to the year 1916 the average daily wage was reported for each class of employees in and around.

TABLE 25

Number of Days Lost by Each Coal Mine in Ohio by Counties for the Year Ending December 31, 1921.

County.	Number of Mines Reporting.	Contributing Causes.						Total.
		Car Shortage.	Labor Shortage.	Strikes.	Mine Disability.	No Market.	All Other Causes.	
Athens	100	2.1	3.0	2.7	6.8	195.0	6.8	215.4
Belmont	130	2.9	1.6	1.7	3.9	122.8	9.3	143.2
Carroll	20	0.3	.....	7.5	1.1	83.1	5.0	96.9
Columbiana	44	0.6	3.0	0.5	4.0	120.0	2.7	131.7
Coshocton	44	1.1	0.1	0.02	4.4	162.5	2.2	170.1
Gallia	9	.....	.....	.....	.....	92.7	.....	92.7
Guernsey	40	1.9	2.4	8.4	8.9	157.0	17.6	196.1
Harrison	43	5.0	2.9	5.2	9.1	91.8	2.9	116.9
Hocking	57	1.5	0.4	0.5	2.9	130.6	8.5	144.4
Holmes	9	.....	.....	.....	.....	84.1	.....	84.1
Jackson	46	0.7	0.2	1.7	4.0	133.3	2.6	142.5
Jefferson	80	2.7	0.3	1.7	3.7	126.4	9.9	144.8
Lawrence	22	.....	.....	0.5	.....	119.9	.....	120.4
Mahoning	18	2.2	.....	.....	.....	81.2	.....	83.3
Medina	3	.....	.....	.....	.....	73.0	.....	73.0
Meigs	35	0.02	.....	1.0	0.9	150.6	8.4	160.9
Monroe	1	.....	.....	.....	.....	144.0	.....	144.0
Morgan	2	.....	.....	.....	.....	189.0	.....	189.0
Muskingum	48	0.1	0.2	2.4	6.7	101.1	11.7	122.2
Noble	12	1.2	0.2	0.3	0.2	123.6	2.5	127.7
Perry	89	2.5	0.5	0.4	2.5	177.4	3.7	186.9
Portage	3	0.7	.....	.....	4.8	127.6	.....	132.7
Scioto	1	.....	.....	.....	.....	50.0	.....	50.0
Stark	66	.....	.....	1.6	1.1	92.5	7.9	103.0
Summit	5	.....	.....	.....	.....	157.2	.....	157.2
Trumbull	1	.....	.....	.....	.....	100.0	.....	100.0
Tuscarawas	111	0.2	0.02	0.9	3.6	102.5	4.6	111.9
Vinton	11	.....	.....	0.4	0.7	131.8	3.1	136.0
Washington	3	.....	.....	.....	.....	133.3	18.7	152.3
Wayne	5	.....	.....	2.0	2.6	82.6	.....	87.2
State	1,053	1.5	0.9	1.8	3.9	130.8	6.4	145.1

TABLE 26
Number of Coal Mines Located on Each of the Following Railroads — By Counties.
(Two mines for which no data were reported are not included in this table)

County.	Total Number Mines Report- ing.	B. & O.	C. A. & C.	C. & M. D.	C. & D.	D. T. & I.	Erie	H. V.	K. & M.	N. Y. C.	N. & W.	O. R. & W.	Pen- na	P. C. & St. L.	P. L. & W.	P. & W. Va.	T. & O. C.	W. & L. E.	Y. O. R.	Z. & W.	Trac- tion.	Wag- on	
Athens	101	6						66	3								21	14				1	4
Belmont	131	65										1	17					5					24
Carroll	20	8											7					6					5
Columbiana	46			2			3						6		4			10	7			2	21
Coshocton	47							7															23
Gallia	16																						9
Guernsey	16																						11
Harrison	44	1								2			18					12					18
Hocking	50							55					3	5		3							4
Holmes	9												1										8
Jackson	51	13				13		1															24
Jefferson	81				4					16			15	1		11		14					20
Lawrence	22	4					1																10
Mahoning	19																						18
Medina	8																						3
Meigs	35							11	10														5
Monroe	1																						1
Morgan	2																						23
Muskingum	46	3										3	5					2		10			11
Noble	15												4										12
Perry	94	19	1					5					11				16			30			1
Portage	4									3													1
Scioto	2	1																					1
Stark	70	5								1			3					7					54
Summit	5																						4
Trumbull	1																						1
Tuscarawas	112	26		2	7								15	6				9					47
Vinton	11	3						8															1
Washington	4																						1
Wayne	6																	1				3	5
State	1,102	165	1	2	13	17	4	153	22	23	4	4	113	15	4	14	37	74	7	42		6	383

CHARACTER OF OPENING.

Ninety-eight mines reported the character of the opening as shown below:

<i>Kind of Opening</i>	<i>Number of Mines</i>
Drift	47
Slope	25
Shaft	12
Drift and slope.....	3
Drift and shaft.....	1
Stripping	4
Surface	1
Pit	5
Total number reporting.....	98(a)

(a) Does not include one mine for which no data was given.

VENTILATION.

The same number of mines reported the mode of ventilation as:

<i>Mode of Ventilation</i>	<i>Number of Mines</i>
Fan	50
Furnace	9
Natural	31
Fan and natural.....	4
Total number reporting.....	98

NUMBER OF EMPLOYEES.

The table following shows the number of employes on the payrolls nearest the fifteenth of each month and would indicate that the lowest point in employment was reached in February, 1921, for this particular industry.

Month.	Number of Employees on the 15th of Each Month.	
	1920 (97 Mines) <i>b</i>	1921 (98 Mines) <i>a</i>
January	1,227	894
February	1,180	842
March	1,240	926
April	1,255	970
May	1,148	1,062
June	1,095	1,090
July	1,017	985
August	976	1,030
September	951	1,065
October	993	1,001
November	948	1,024
December	996	1,057

a Does not include one mine for which no data was given.

b Does not include one mine for which no data was given and two mines in which owners did their own work.

DAYS IN OPERATION.

Ninety-eight mines report the number of days in operation which is given in the following table, with a comparison of the year 1920.

Number of Days in Operation.	1920 (98 mines) <i>b</i>	1921 (98 mines) <i>a</i>
Less than 100.....	8	17
100 but under 150.....	8	16
150 but under 200.....	11	21
200 but under 250.....	25	20
250 but under 300.....	38	20
300 but under 314.....	7	4
314 and over.....	1	.....

a Does not include one mine for which no data was given.

b Does not include one mine for which no data was given, and two mines in which owners did their own work.

HOURS OF LABOR PER WEEK.

The data following compiled from the reports indicate that 60 per cent of the mines worked 60 hours per week when in operation.

Hours of Labor Per Week.	Number of Mines Reporting.
Less than 44.....	2
44	7
Over 44 but under 48.....	.....
48	60
Over 48 but under 54.....	1
54	20
Over 54 but under 56.....	.....
56	1
Over 56 but under 60.....	2
60	5
	98 <i>a</i>

a Does not include one mine for which no data was given.

WAGE AND SALARY PAYMENTS.

Wages and salaries paid to employes in the fire clay industry, segregated as to each class of work are given in the following table, showing that during the year 1921, \$1,235,790 was paid out for this work.

County.	Total Number Mines Reporting.	To Wage Earners.	To Office Help.	To Superintendents and Managers.	Total.
Athens	2	\$40,258	\$800	\$1,800	\$42,858
Carroll	7	132,645	632	4,634	137,911
Columbiana	10	69,094	2,400	4,000	75,494
Cuyahoga	1	42,465	.....	.....	42,465
Delaware	1	2,922	.....	.....	2,922
Guernsey	1	1,836	.....	1,050	2,886
Hamilton	1	3,752	.....	.....	3,752
Hocking	3	60,334	.....	3,345	63,679
Jackson	2	7,257	.....	.....	7,257
Jefferson	13	174,217	1,950	17,302	193,469
Lawrence	4	43,854	7,055	5,400	56,309
Mahoning	2	18,454	1,500	2,113	22,067
Muskingum	5	10,924	.....	.....	10,924
Perry	9	54,404	150	765	55,319
Scioto	7	72,366	2,800	5,342	80,508
Stark	8	92,990	.....	3,145	96,135
Summit	4	36,479	300	.....	36,779
Tuscarawas	18	293,576	300	11,180	305,056
State	98	\$1,157,827	\$17,887	\$60,076	\$1,235,790

CLASSIFIED WEEKLY WAGE RATES.

Payrolls of ninety-eight fire clay mines for the week of greatest employment show a total of 1,472 employees of all classes and the following table gives the number in each range of wage rates listed as to occupation.

CLASSIFIED WEEKLY WAGES OF EMPLOYEES IN FIRE CLAY MINES IN OHIO FOR THE WEEK OF GREATEST EMPLOYMENT DURING THE YEAR ENDING DECEMBER 31, 1921.

Occupation.	Under \$6	\$6 but under \$7	\$7 but under \$8	\$8 but under \$9	\$9 but under \$10	\$10 but under \$12	\$12 but under \$15	\$15 but under \$18	\$18 but under \$21	\$21 but under \$25	\$25 but under \$30	\$30 but under \$35	\$35 but under \$50	\$50 or over	Total.
Wage Earners—															
Inside Employees.....	4	1	1	.....	2	6	42	41	84	165	259	223	243	40	1,061
Outside Employees.....	.....	1	.....	1	.....	2	6	82	43	106	52	50	50	5	398
Office Help—															
Males .....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	8	.....	2	1	8
Females .....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	1	.....	.....	5
Total	4	2	1	1	2	9	48	124	79	272	315	274	295	46	1,472

GYPSUM.

PRODUCTION.

The reports for the year 1921 show that gypsum was produced in only three mines in the State of Ohio and these are in Ottawa County. The following figures indicate a very substantial increase over the year 1918.

Year.	Tons Pro- duced.
1916	279,742
1917	270,552
1918	199,456
1919	251,314
1920	281,118
1921	263,905

NUMBER OF EMPLOYEES.

Following is given the number of employes on the payroll on the fifteenth of each month and would indicate that September was the month of maximum employment in this industry.

Month.	Number of Em- ployes on the 15th of Each Month. (3 Mines.)
January	213
February	230
March	232
April	268
May	244
June	262
July	265
August	282
September	310
October	307
November	256
December	239

DAYS IN OPERATION.

The next tabulation shows the number of days the industry operated during the year 1921.

Number of Days in Operation.	Number of Establishments reporting.
Less than 100.....	.....
100 but under 150.....	.....
150 but under 200.....	.....
200 but under 250.....	.....
250 but under 300.....	3
300 but under 314.....	.....
314 or over.....	.....
	3

HOURS OF LABOR PER WEEK.

The reports show that the gypsum mines worked sixty hours per week when in operation during the last year.

WAGE AND SALARY PAYMENTS.

\$352,963 was paid out in wages to adult wage earners during the year 1921.

WEEKLY WAGES AND SALARIES.

The following table indicates that 339 workers were engaged in the industry and segregated as to occupation gives the number within certain wage ranges.

Occupation.	Number receiving each classified weekly wage.						Total.
	\$18 but under \$21	\$21 but under \$25	\$25 but under \$30	\$30 but under \$35	\$35 but under \$50	\$50 or over	
Wage Earners —							
Inside	10	84	141	42	18	1	296
Outside	3	6	8	14	9	.....	40
Office Help —							
Males .....	.....	.....	.....	2	.....	.....	2
Females	1	.....	.....	.....	.....	.....	1
State	14	90	149	58	27	1	339

LIMESTONE.

PRODUCTION.

The following table gives the production of limestone by counties in the State of Ohio for the years ending December 31, 1920 and 1921.

County.	Tons Produced	
	1920 ^a	1921
Adams	207,115	59,810
Allen	327,993	538,552
Belmont .....	.....	3,750
Clark	64,311	25,973
Clinton	27,429	62,642
Crawford	46,237	56,404
Delaware	68,841	93,442
Erie	762,875	474,542
Franklin	1,435,237	914,813
Greene	17,600	697
Hancock	164,013	222,595
Hardin	424,900	542,840
Highland	15,000	20,850
Jackson .....	.....	4,081
Jefferson .....	.....	4,000
Lawrence	175,607	297,575
Logan	10,000	28,000
Lucas	467,271	527,613
Mahoning	139,962	32,433
Marion	187,324	241,090
Mercer	14,560	28,500
Miami	393,987	196,748
Montgomery	111,084	19,773
Muskingum .....	.....	309,060
Ottawa	2,022,165	1,097,541
Paulding	8,125	11,375
Preble	297,400	201,650
Putnam	37,744	82,030
Ross	44,440	46,338
Sandusky	947,991	718,303
Seneca	719,475	346,758
Stark	103,758	131,284
Trumbull	1,000	.....
Tuscarawas	518	.....
Union	2,674	.....
Van Wert	150,669	233,678
Wood	190,917	225,742
Wyandot	248,984	206,898
State	9,837,206	8,006,880

^a Previous to the year 1920 limestone production was not tabulated by counties.

DISPOSITION OF PRODUCT.

The following table shows a comparison of the years 1916 to 1921 inclusive in the disposition of product and reflects in the third and fourth items that road building activity has increased extensively, while the tenth item would indicate that there is again a large quantity of pulverized limestone being used to sweeten the soil.

Disposition of Product.	Tons Produced.					
	1916 (116 Quar.)	1917 (113 Quar.)	1918 (108 Quar.)	1919 (99 Quar.)	1920 (108 Quar.)	1921 (113 Quar.)
Burned into lime.....	606,745	813,086	674,968	790,328	766,602	724,026
Fluxing purposes	4,757,798	5,124,579	5,713,932	3,331,272	4,384,053	1,434,776
Cement	281,445	202,852	219,534	330,635	300,158	463,223
Macadamizing or ballast.....	5,610,798	3,236,396	2,963,648	2,727,497	2,707,823	4,267,627
Piers and protection purposes	76,486	31,195	16,774	1,202	11,161	16,365
Block or dimension stone....	63	181	.....	275	.....	.....
Ordinary building stone.....	42,370	82,481	6,226	8,394	20,424	6,701
Concrete purposes .....	.....	.....	.....	486,583	1,127,224	611,342
Paving stone	330,644	49,264	43,643	130,503	40,592	21,106
Agricultural purposes .....	.....	.....	.....	78,065	34,643	49,415
Flagging .....	.....	.....	.....	.....	.....	290
Curbstone	1,500	8,770	.....	.....	9,300	.....
Miscellaneous purposes	542,803	1,072,943	1,106,486	206,001	456,226	412,030
State	12,250,652	10,671,697	10,765,201	8,691,835	9,637,206	8,006,830
Total Tons of Lime Produced .....	.....	.....	82,700	332,619	392,883	371,653

NUMBER OF EMPLOYEES.

The next table shows the number of employees on the payroll nearest the fifteenth of each month for the year 1921 with comparative data for the year 1920, and would show that employment during the two years was lowest during the month of December, 1921.

Month.	Number of Employees on the Payroll Nearest the 15th of Each Month.	
	1920 (108 quarries.)	1921 (113 quarries)
January	2,748	2,726
February	2,632	2,765
March	3,029	2,883
April	3,291	2,955
May	3,515	3,169
June	3,765	3,505
July	3,878	3,319
August	3,855	3,316
September	3,909	3,514
October	3,812	3,331
November	3,503	2,999
December	3,023	2,560

DAYS IN OPERATION.

The following shows that a majority of the quarries operated less than two hundred days during the year.

<i>Days in Operation.</i>	<i>Number of Quarries Reporting</i>
Less than 100.....	15
100 but under 150.....	30
150 but under 200.....	26
200 but under 250.....	13
250 but under 300.....	19
300 but under 314.....	9
314 or over.....	1
Total	113

HOURS OF LABOR PER WEEK.

The next table indicates the hours of employment per week when in operation.

<i>Normal Hours of Labor Per Week</i>	<i>Number of Quarries Reporting</i>
Under 48	2
48	6
Over 48 but under 54.....	7
54	13
Over 54 but under 56.....	8
56 .....	..
Over 56 but under 60.....	8
60	67
Over 60 but under 72.....	1
72 .....	..
Over 72	1
Total	113

WAGE AND SALARY PAYMENTS.

The reports show that a total of \$3,844,866 was paid to workers in the limestone industry during the year.

CLASSIFIED WEEKLY WAGE RATES.

The following indicates that there were 4,421 workers engaged in the industry during the week of greatest employment and arranged as to occupation gives the number within certain wage and salary ranges:

CLASSIFIED WEEKLY WAGES OF EMPLOYEES IN LIMESTONE QUARRIES FOR THE WEEK OF GREATEST EMPLOYMENT DURING THE YEAR ENDING DECEMBER 31, 1921.

Occupation.	Number of employees receiving each classified weekly wage.															Total.
	Under \$6	\$6 but under \$7	\$7 but under \$8	\$8 but under \$9	\$9 but under \$10	\$10 but under \$12	\$12 but under \$15	\$15 but under \$18	\$18 but under \$21	\$21 but under \$25	\$25 but under \$30	\$30 but under \$35	\$35 but under \$50	\$50 or over		
Wage Earners	27	7	15	16	7	28	69	222	742	1,064	1,207	523	295	47	4,269	
Office Help —																
Male			1	.....	.....	2	3	6	5	11	21	21	14	19	103
Female			1	.....	.....	1	4	6	14	7	8	2	5	1	49
State	27	7	17	16	7	31	76	234	761	1,082	1,236	546	314	67	4,421	

SANDSTONE.

PRODUCTION AND DISPOSITION.

The following table gives the production of sandstone in the State of Ohio for the past six years and the purpose for which used. It will be noted that production for the past year did not keep up with the average since 1916.

Purpose for Which Used.	Unit of Measure.	Quantity Produced.					
		1916 (45 Quar.)	1917 (48 Quar.)	1918 (49 Quar.)	1919 (44 Quar.)	1920 (46 Quar.)	1921 (42 Quar.)
Rough Building Stone.....	Cubic Feet.....	679,920	623,515	130,142	1,357,263	332,764	581,732
Sawed Building Stone.....	Cubic Feet.....	696,183	783,042	245,759	390,155	400,929	423,412
Burial Vaults.....	Cubic Feet.....	14,695	.....	115,941	204,482	154,056	84,759
Curbing.....	Cubic Feet.....	1,248,494	884,907	281,177	754,668	317,526	695,281
Flagging.....	Cubic Feet.....	1,019,492	849,317	719,806	860,406	618,685	685,867
Roofing and Concreting.....	Tons (2000 lbs.)	.....	.....	23,827	17,223	37,451	.....
Pulp Stones.....	Tons (2000 lbs.)	.....	.....	17,710	2,941	7,026	3,417
Grindstones.....	Tons (2000 lbs.)	44,547	48,071	54,270	37,717	37,494	13,239
Silica Sand.....	Tons (2000 lbs.)	456,420	670,912	525,292	344,154	532,017	189,864
Whetstones, Oilstones, Etc.....	{ Gross..... Pounds.....	8,103	1,819	981	.....	.....	.....
Ruble Stones.....	Tons (2000 lbs.)	.....	.....	.....	1,308	.....	.....
Lathe Stones.....	Pieces.....	.....	.....	.....	8,286	26,245	6,732
Seythe Stones.....	Pieces.....	.....	.....	.....	16,494	21,151	.....
Miscellaneous Purposes (including stone for breakwaters and lake filling, furnace lining, etc.).....	Pieces.....	.....	.....	.....	.....	227,088	197,712
	Tons (2000 lbs.)	335,179	136,458	108,548	75,069	73,933	77,746

